

Updates of Energy Efficiency Standards in China

中国能效标准最新进展



Resources and Environment Branch, CNIS

中国标准化研究院资环分院

2016.10.13

Snapshot of CNIS

中国标准化研究院简介



- China National Institute of Standardization dates back to 1963. As a national non-profit institute affiliated to AQSIQ, CNIS is dedicated to standardization research, especially for the all-round, strategic and comprehensive issues of standardization regarding national economic and social development.
- 中国标准化研究院，始建于1963年（初名国家科委标准化综合研究所），是直属于国家质总局，从事标准化研究的国家级社会公益类科研机构，主要针对我国国民经济和社会发展中全局性、战略性和综合性的标准化问题进行研究。



Research fields

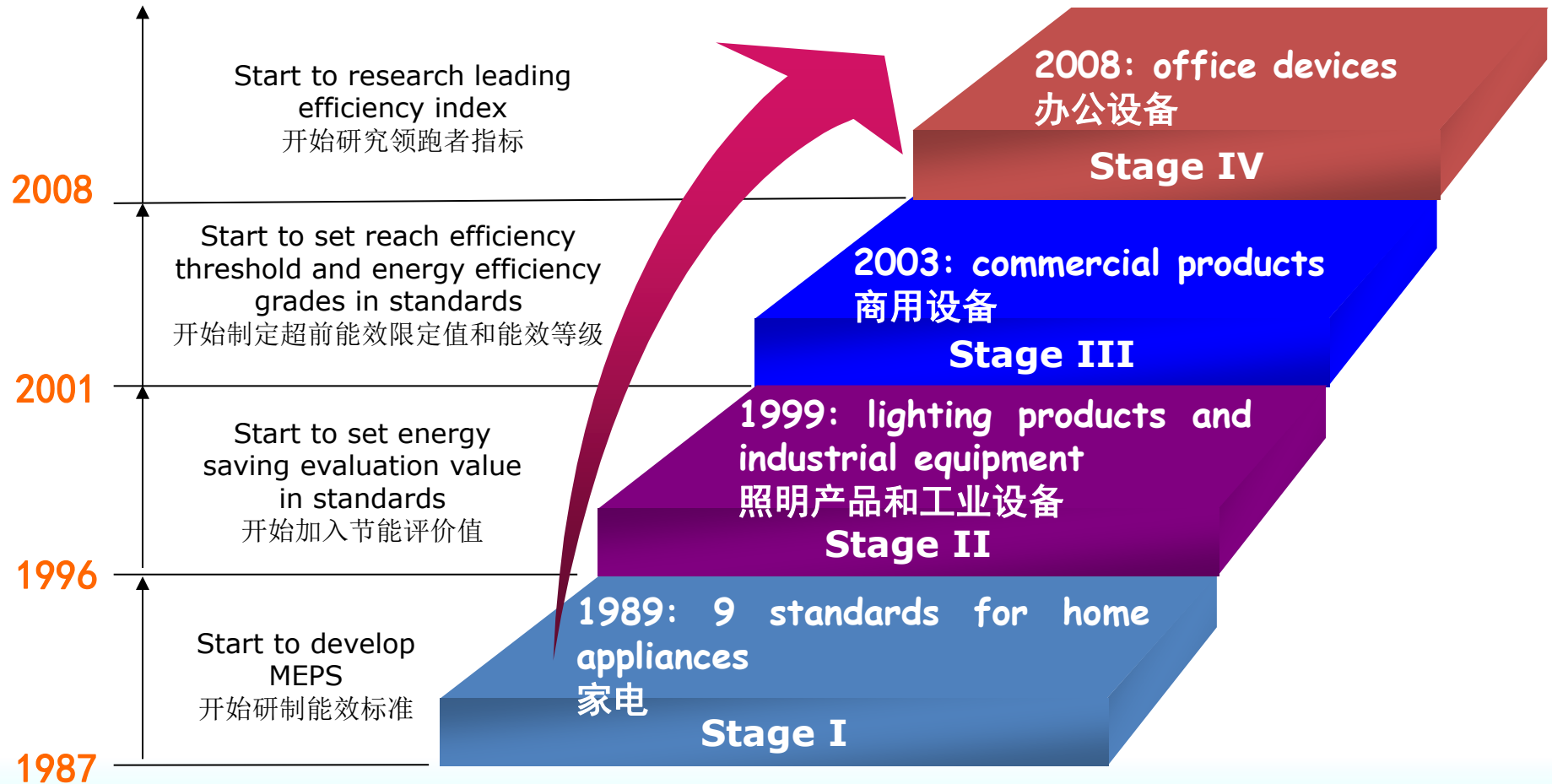
分院研究领域



节能 Energy conservation	应对气候变化 Climate Change	循环经济 Circular economy	环保产业 Environment industry	节水 Water conservation	新能源 New energy
能效 Energy efficiency	碳排放方法学 Methodologies	生态设计 Eco-design	环保装备 Environment equipment	水效 Water efficiency	太阳能 Solar energy
能耗限额 Allowance of energy consumption	低碳评价 Low carbon evaluation	清洁生产 Clean production	环保产品 Environment protection product	取水定额 Quota of water usage	氢能 Hydrogen energy
系统优化及经济运行 System optimization and economic operation	低碳技术 Low carbon tech.	综合利用 Comprehensive utilization	环保服务 Environment service	节水评价 Water saving evaluation	生物质 biomass
能源管理及绩效评估 Energy Management and Performance evaluation	碳管理 Carbon management	产业链链接及循环化改造 Supply chain and circular retrofitting		水足迹 Water footprint	
节能服务 Energy efficiency services	碳金融 Carbon financing				

History of Energy Efficiency Standards

能效标准的历史



Cycles for implementing energy efficiency standards

能效标准实施路径



- **Testing methods**测试方法
- **Data**数据
- **Commitment of leadership**领导重视

Basis基础

Standards标准

- **Legal basis**法律基础
- **Methodology and tools**方法和工具
- **Implementation scheme**实施机制

Compliance
符合性

- **MV&E scheme**监督核查处罚机制
- **Technical capacity**技术能力
- **Post-evaluation**后评估

Labeling标识

- **Implement rules**实施规则
- **Administrative institutes**管理机构

Communication
推广

- **Online channel**在线
- **Handbook**手册
- **Consumer campaign**消费者宣传
- **International communication**国际交流

Energy efficiency standards for end energy-using product

终端用能产品能效标准

64 standards 能效标准64项

19+1 for household appliances

家用电器20项

13 for Lighting equipment

照明器具13项

7 for commercial devices

商用设备7项

17+2 for industrial equipment

工业设备19项

5 for office equipment

办公设备5项

Mandatory energy efficiency standards
强制性能效标准

MEPS and Reach MEPS
能效限定值及超前能效限定值

Energy efficiency grades
能效分级

Evaluating index for energy saving product
节能评价值



Market access, phasing out bad products
市场准入、高耗能产品淘汰



Mandatory Energy Labeling Program
强制性能效标识制度



Voluntary certification scheme for energy saving products
自愿性的节能产品认证制度

节能产品惠民工程
节能汽车(1.6升及以下乘用车)



企业名称(或简称) 品牌 车辆型号
综合燃料消耗量: 100 L/100 km
购置补贴金额: 3800 元

Promotion of appliances in rural areas
家电下乡

Financial incentive for efficient products
节能产品惠民工程

Public procurement of efficient product
政府节能采购

Local financial incentive
地方节能家电补贴

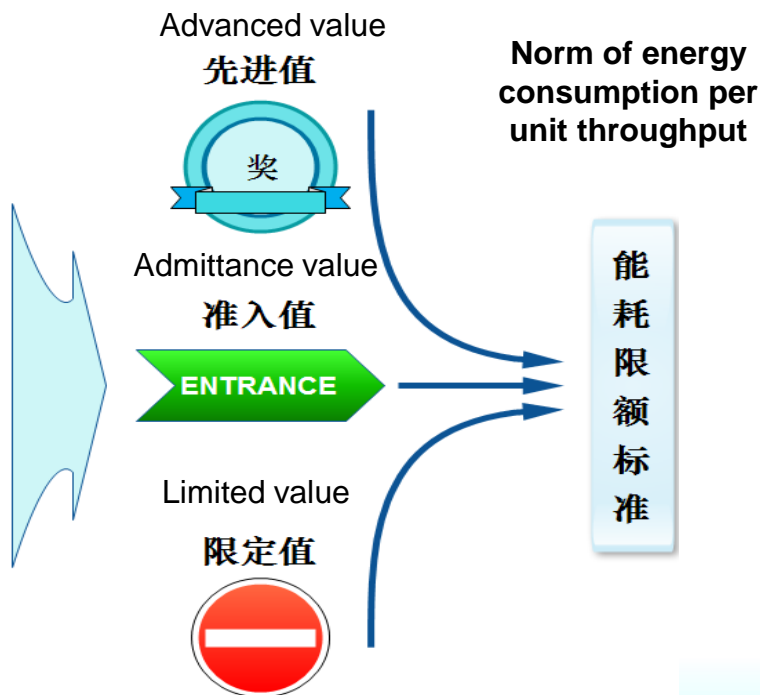
Preference of income tax for enterprises
企业所得税优惠

Energy Efficiency for Sectors: Norms of energy consumption per unit throughput

行业能效标准：单位产品能耗限额标准

The first batch of 22 standards may save 200 million tce. They have been the main technical basis for energy efficiency assessment of new projects, phasing out backward production capacity, energy benchmarking, incentive and constrained policies.

第一批颁布的22项强制性单位产品能耗限额标准可以为国家节约2亿吨标准煤，成为固定资产投资项目节能评估、落后产能淘汰、能效对标、激励约束政策实施的主要依据



Nowadays, there are 104 mandatory standards for sectors of nonferrous metals, iron & steel, chemical engineering, power, building materials, coal mining, paper, food and transportation.

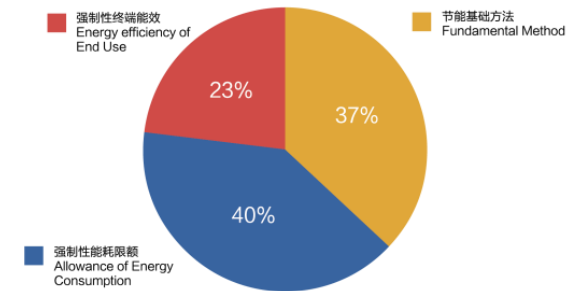
目前，已发布强制性能耗限额标准104项，覆盖有色、钢铁、化工、电力、建材、煤炭、造纸、食品、交通等行业

100 Energy Efficiency Standards Promotion Program

百项能效标准推进工程



- ❖ In 2012, NDRC and SAC launch the 100 Energy Efficiency Standards Promotion Program to develop or revise more than 100 key standards for energy conservation
- ❖ 2012年，国家发改委和国家标准委启动实施“百项能效标准推进工程”，目标两年内制修订100项重要的节能国家标准
- ❖ The main contents of the program include energy efficiency standards and energy consumption quotas
- ❖ “百项能效标准推进工程”内容主要是终端用能产品能效标准和单位产品能耗限额标准
- ❖ By 2015, 206 standards were published. It is estimated that these standards can save 179 billion kWh and 200 million tce.
- ❖ 2015年底，圆满完成2期“百项工程”，发布了206项节能国家标准。据测算，标准的全面实施可以实现年节能量1700亿度，2亿吨标准煤。



Energy efficiency standards in the 13th Five-Year Plan

“十三五”能效标准发展



- ❖ The 13th FYP of National Economic and Social Development
- ❖ “十三五” 规划
 - 健全节能标准体系。实现重点行业、设备节能标准全覆盖
 - To improve energy conservation standard system. The standards will cover key sectors and equipment.
- ❖ Development plan for national standardization system (2016-2020)
- ❖ 国家标准化体系建设发展规划（2016—2020年）
 - To integrate and reduce mandatory standards
 - 整合精简强制性标准
 - To establish monitoring and evaluation system for standard implementation and enhance supervision by the society
 - 建立标准实施的监督和评估制度，加强标准实施的社会监督
 - To deepen the international collaboration
 - 深化标准化国际合作
 - To improve energy conservations standards and speed up the development of energy efficiency standards
 - 提高节能标准，加快能效能耗标准研制

Vision of Energy Efficiency Standards

节能标准化的远景



《关于加强节能标准化工作的意见》（国办发〔2015〕16号）
Opinions of the General Office of the State Council on Strengthening the
Standardization of Energy Conservation

工作目标：2020年前完善两大体系
Objectives: To improve 2 systems by 2020

节能标准体系
Standard System

实施与监督工作体系
Implementation and
Inspection system

主要任务
Tasks

创新工作机制
Innovative Mechanism

完善标准体系
Improved Standard
System

强化标准实施
Strengthened
Implementation

Next steps: important standards

下一步：重点标准



- ❖ To improve the standard for ACs, Motor system, LED lighting, water heaters
- ❖ 提升重点产品能效水平：空调、电机系统、LED照明产品、热水器等
- ❖ To increase the standards: air cleaners, dust collectors, data center
- ❖ 扩展标准范围：空气净化器、除尘器、数据中心等
- ❖ To integrate some standards: water heaters, sector norms of energy consumption per unit throughput
- ❖ 整合部分能效标准：热水器能效标准、分行业能耗限额标准等
- ❖ To adopt leading efficiency index in the energy efficiency standards and sector norms of energy consumption per unit throughput
- ❖ 在能效标准和能耗限额标准中引入能效“领跑者”指标

Next steps: key programs

下一步：重点工作



- ❖ To define the development plan for energy conservation standardization system
- ❖ 制定节能标准化体系建设方案
- ❖ To launch the pilot and demonstration projects for energy efficiency standards
- ❖ 开展节能标准化试点示范
- ❖ To continue the 100 Energy Efficiency Standards Promotion Program
- ❖ 继续实施“百项能效标准推进工程”
- ❖ Post-evaluation of standard implementation
- ❖ 开展标准实施后评估

Next steps: International Collaboration

下一步：国际合作



- Public-Private collaboration
- 加强政府、标准研究机构 and 产业界的互动
- Bi-directional experiences sharing
- 双向的经验分享，传播中国经验
- Best practices adoption
- 积极借鉴国际最佳实践

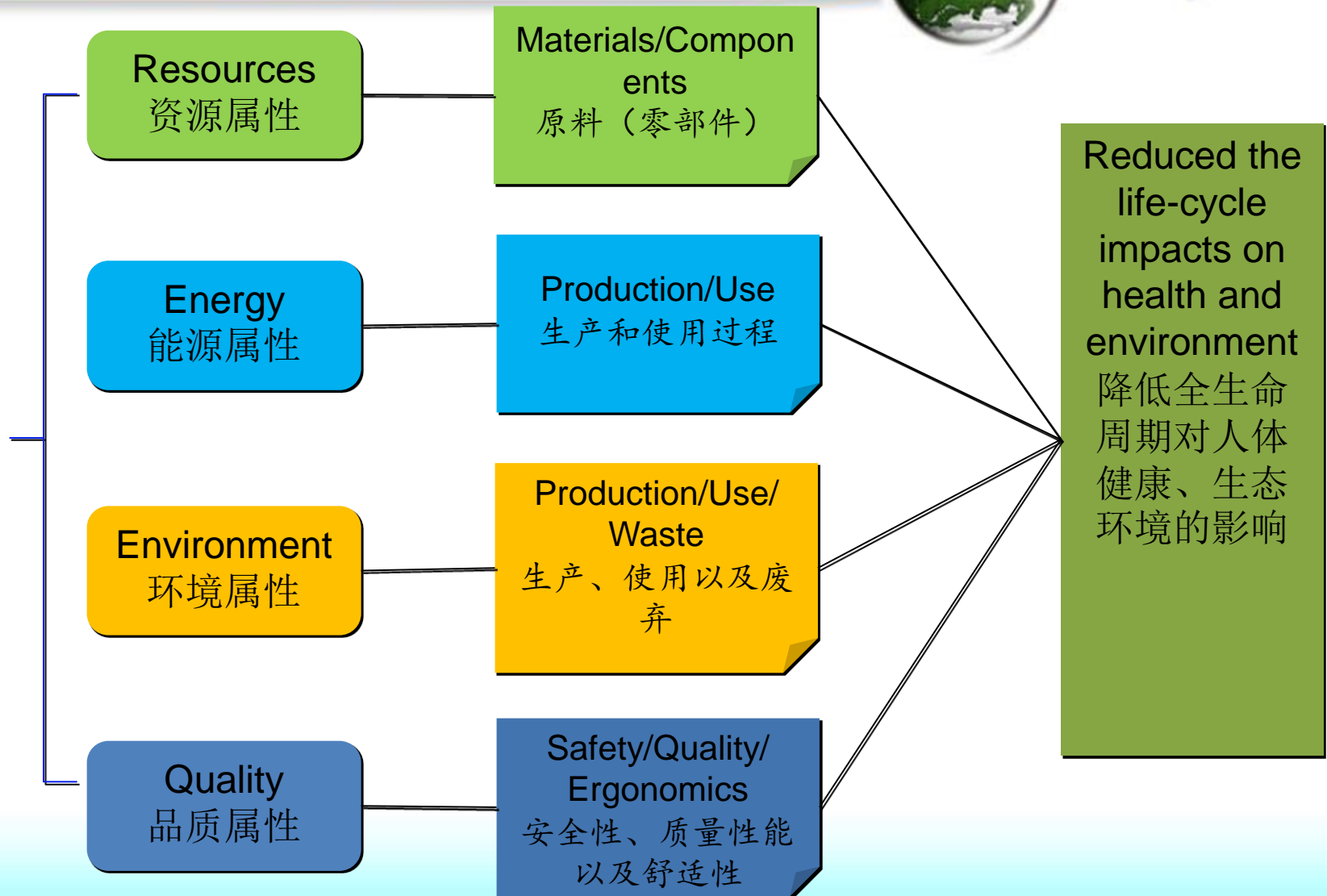
Future: Green Products (1)

未来：绿色产品（1）



Green Product

绿色产品



Future: Green Products (2)

未来: 绿色产品 (2)



- 《绿色设计产品评价技术规范 房间空气调节器》ACs
- 《绿色设计产品评价技术规范 洗衣机》Washing Machines
- 《绿色设计产品评价技术规范 家用电冰箱》Refrigerators
- 《绿色设计产品评价技术规范 吸油烟机》Range Hoods
- 《绿色设计产品评价技术规范 家用电磁灶》Induction Cookers
- 《绿色设计产品评价技术规范 电饭锅》Rice Cookers
- 《绿色设计产品评价技术规范 储水式电热水器》Storage water heaters
- 《绿色设计产品评价技术规范 空气净化器》Air cleaners
- 《绿色设计产品评价技术规范 卫生陶瓷》Sanitary ware
- 《绿色设计产品评价技术规范 纯净水处理器》Water Purifiers
- 《绿色设计产品评价技术规范 木塑型材》Wood-Plastic Sections
- 《绿色设计产品评价技术规范 砌块》Building blocks
- 《绿色设计产品评价技术规范 陶瓷砖》Ceramic tile

**The first batch of 13
Evaluation Criteria
for Green Design
Products**

**首批13项绿色设计产
品评价团体标准**

Future: Green Products (3)

未来：绿色产品 (3)



Pilot of Green Design Product Evaluation

绿色设计产品评价试点



- Voluntary application from enterprises
- 企业自愿申报
- Responsibilities of enterprises
- 企业主体责任

企业注册
Registration of enterprises



产品填报
Submission of products



产品审核
Verification of products



产品发布
Communication of products

Future: Green Products (3)

未来：绿色产品 (3)



Pilot of Green Design Product Evaluation

企业注册
Registration of enterprises

- Volun
- enterpr
- 企业自
- Respo
- 企业主

The screenshot shows the homepage of the 'Green Design Product Declaration Platform' (绿色设计产品申报平台). The header features the platform's logo and name. Below the header, there are two main sections: 'News' (新闻快讯) and 'Announcements' (通知公告). The 'News' section lists four items, all dated 2016-03-22, related to green consumption, product lists, and government policies. The 'Announcements' section lists three items, dated 2016-03-09, 2016-03-08, and 2016-02-15, regarding the declaration process and product lists. At the bottom, there is a navigation bar with icons and links for 'Product Declaration' (产品申报), 'Product List' (产品目录), 'Download Materials' (资料下载), 'Declaration Guide' (申报指南), 'Enterprise Pilot Declaration' (企业试点申报), 'Alliance Standards' (联盟标准), and 'Enterprise Self-Declaration Standards' (企业标准自我声明). The footer indicates the copyright is © 2015 Green Design Product Declaration Platform.

绿色设计产品申报平台

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▶ 中共中央国务院印发《生态文明体制改革总体...	2016-03-22
▶ 加强“绿色供给”推动供给侧结构性改革	2016-03-22

通知公告	更多>>
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Communication of products

Thank you!

谢谢！

